

PATENT ABSTRACTS OF JAPAN

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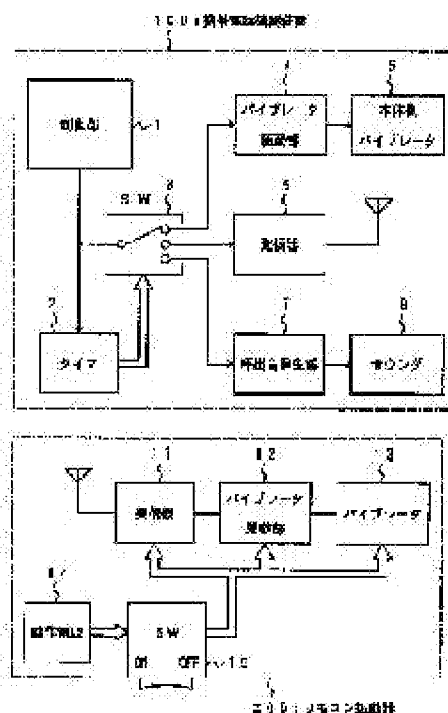
(54) PORTABLE TELEPHONE SET

(57)Abstract:

PROBLEM TO BE SOLVED: To suppress power consumption to the utmost even when a power supply is left switched on by operating a main body side vibration generating means at first on the arrival of an incoming call so as to vibrate a vibrator of a portable telephone set for notification of the incoming call to the user and vibrating a remote control vibrator through the automatic changeover of a switch when the portable telephone set does not hook off within a prescribed time so as to inform the arrival of the incoming call.

SOLUTION: In the case that the vibration notice mode is set, a vibrator drive section drives a main body side vibrator 5 to vibrate a portable telephone set main body so as to inform the arrival of an incoming call to the user.

When the telephone set is not hooked off within a prescribed time, a switch 3 is switched by a signal from a timer 2 to give a control signal from a control section 1 to a transmitter 6, which sends a radio signal to activate a remote control vibrator 200. The transmitted radio signal is received by a receiver 11 and a vibrator drive section 12 drives a vibrator 13 to vibrate the remote control vibrator 200.



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CLAIMS

[Claim(s)]

[Claim 1]A portable telephone which has an incoming call notice means to tell a user about mail arrival by vibration when there is arrival characterized by comprising the following. It is the main part side vibration generating means at least to the portable telephone body side. A ringing tone generating means. A remote-control-operation means to operate a remote control (remote control) vibrator by remote control. A switch which chooses any of these vibration generating means, a ringing tone generating means, and a remote-control-operation means they are, a timer, and a control section which controls the whole are provided, and. When a vibration generating means is provided in said remote control vibrator, the portable telephone concerned is set as oscillating information mode in which mail arrival is told by vibration and there is mail arrival, Said control section operates said main part side vibration generating means first, vibrates the portable telephone concerned, and tells a user about mail arrival, An incoming call notice means to change said switch automatically [when a user does not do off-hook into fixed time (T_1) measured with said timer], to vibrate said remote control vibrator, and to tell a user about mail arrival.

[Claim 2]Said control section operates said main part side vibration generating means first, vibrates the portable telephone concerned, and tells a user about mail arrival, Change said switch automatically [when a user does not do off-hook into fixed time (T_1) measured with said timer], vibrate said remote control vibrator, and a user is told about mail arrival, A portable telephone given [provided with an incoming call notice means to which said switch is changed automatically / when a user does not do off-hook into fixed time (T_2) measured with said timer /, and singing of the ringing tone is carried out by said ringing tone generating means] in

the 1st paragraph of a claim.

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DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[Field of the Invention]This invention relates to the portable telephone provided with what is called a remote control (remote control) vibrator.

[0002]

[Description of the Prior Art]Some portable telephones in recent years are provided with what is called a remote control vibrator. When a portable telephone has mail arrival, singing of the ringing tone is carried out by the ringing tone generating means with which the portable telephone was usually equipped, and a user is told about this arrival, but the inside of a meeting, and in a train, this ringing tone becomes troublesome for others. Therefore, by the method of vibrating such a portable telephone body, although there is a device which makes a vibrator build in a portable telephone body, vibrates this vibrator, and tells mail arrival, if a user does not always attach a portable telephone to the body, it does not understand. Then, separate a vibrator, consider it as a remote control vibrator, and the portable telephone body is put in order into the back etc., When only this remote control vibrator is attached to the body and there is mail arrival, there is a portable telephone provided with the remote control vibrator which tells a user about mail arrival by vibrating this remote control vibrator.

[0003]As advanced technology of the portable telephone provided with such a remote control vibrator, although there are JP,3-283852,A "telephone device" etc., for example, In the case of such a portable telephone, selection operation of what one or one side is usually carried out to reporting means which a vibrator is not formed in a portable telephone body, but are provided in the portable telephone body, such as a ringing tone singing means, with a selecting switch.

[0004]However, since it is used in order that a remote control vibrator may avoid the troublesomeness which attaches the portable telephone body to the body, what also has a very small cell which the small weight saving is carried out farther than a portable telephone

body, therefore is built in is used, but. Although consumption of electric power is comparatively small at the time of reception of an electric wave, in order to exhaust comparatively big electric power for generating of vibration, when required, the case of it being unable to use being able to cause a dead battery happens well. Therefore, from the necessity of switching on the power supply of a remote control vibrator, the user needs to stop ON/OFF of an electric power switch on a his mind, only when required.

[0005]

[Problem(s) to be Solved by the Invention]In the portable telephone provided with the conventional remote control vibrator as mentioned above, only when required in order to prevent useless consumption of a cell, are using switching on a power supply and operating a remote control vibrator, but. This operation was troublesome, and when it was neglected with the remote control vibrator turned on, the problem that a cell will be exhausted was in the inside of a short time.

[0006]It is made in order that this invention may solve this problem, and it aims at providing the portable telephone provided with the remote control vibrator by which the power consumption is pressed down as much as possible turn [the remote control vibrator], having the conventional function and the same function.

[0007]

[Means for Solving the Problem]In a portable telephone which has an incoming call notice means to tell a user about mail arrival by vibration when a portable telephone concerning this invention has mail arrival, To the portable telephone body side, at least The main part side vibration generating means and a ringing tone generating means, A remote-control-operation means to operate a remote control (remote control) vibrator by remote control, A switch which chooses any of these vibration generating means, a ringing tone generating means, and a remote-control-operation means they are, a timer, and a control section which controls the whole are provided, and. When a vibration generating means is provided in said remote control vibrator, the portable telephone concerned is set as oscillating information mode in which mail arrival is told by vibration and there is mail arrival, Said control section operates said main part side vibration generating means first, vibrates the portable telephone concerned, and tells a user about mail arrival, When a user did not do off-hook into fixed time (T_1) measured with said timer, it had an incoming call notice means to have changed said switch automatically, to have vibrated said remote control vibrator, and to tell a user about mail arrival.

[0008]Said control section operates said main part side vibration generating means first, vibrates the portable telephone concerned, and tells a user about mail arrival, Change said switch automatically [when a user does not do off-hook into fixed time (T_1) measured with said timer], vibrate said remote control vibrator, and a user is told about mail arrival, When a user

did not do off-hook into fixed time (T_2) measured with said timer, it had an incoming call notice means to which said switch is automatically changed and singing of the ringing tone is carried out by said ringing tone generating means.

[0009]A portable telephone of this invention is having the above composition, and is made with composition which presses down consumption of electric power by useless vibration of a remote control vibrator. Since ringing tone was considered as composition which carries out singing when a portable telephone body was vibrated first, then a remote control vibrator was vibrated, when oscillating information mode is set up, and off-hook still was not carried out, a user-friendly device certainly told mail arrival by user is obtained.

[0010]

[Embodiment of the Invention]Hereafter, the embodiment of this invention is described using a drawing. Drawing 1 is a block diagram showing one embodiment of the incoming call notice means relevant to this invention among the portable telephones provided with the remote control vibrator of this invention. the control section which 100 is the portable telephone body side device, and 200 is a remote control vibrator, and controls the whole incoming call notice means 1 in a figure, and 2 -- as for the main part side vibrator and 6, a changeover switch and 4 are [a ringing tone generating part and 8] sounders a transmitter and 7 a vibrator actuator and 5 a timer and 3. Although the remote control vibrator 200 comprises the receiver 11, the vibrator actuator 12, the vibrator 13, the operation power 14, and electric power switch 15 grade, this is the same composition as the usual remote control vibrator.

[0011]Next, operation is explained using the flow chart of drawing 2. In [if the control section 1 detects mail arrival in Step S1] the control section 1, When it detects whether this portable telephone is set as oscillating information mode (Step S2) and is not set as oscillating information mode, it moves to Step S3, the sounder 8 is operated by the ringing tone generating part 7, and singing of the ringing tone is carried out. And when a user does off-hook, singing is stopped and the processing is ended (step S4). (when a telephone is taken)

[0012]When oscillating information mode is set up at Step S2, it moves to Step S5, and the main part side vibrator 5 is made to drive by the vibrator actuator 4, a portable telephone body is vibrated, and a user is told about that there is mail arrival. And when off-hook is carried out after that, end the processing, but (Step S6). When there is off-hook ** into predetermined time (T_1) as for nothing (Step S7), the switch 3 operates and changes by the signal from the timer 2, the control signal from the control section 1 is inputted into the transmitter 6, and the radio signal for operating the remote control vibrator 200 from the transmitter 6 is sent. It is received by the receiver 11, the vibrator actuator 12 drives the vibrator 13, and the sent radio signal vibrates the remote control vibrator 200.

[0013]Namely, in this embodiment, when there is mail arrival and oscillating information mode is chosen, vibrate first the main part side vibrator 5 built in the portable telephone body, and tell

a user about mail arrival, but. Even if it carries out predetermined time (T_1) vibration of the main part side vibrator 5, when a user does not do off-hook, the user and the portable telephone are separated and a user judges that they have attached the remote control vibrator 200 to the body, Use vibrating the vibrator 13 of the remote control vibrator 200, and it does not perform vibrating the remote control vibrator 200 immediately, if it is oscillating information mode like the conventional device, It has composition which presses down unnecessary operation (generating of vibration) of the remote control vibrator 200, and presses down consumption of electric power.

[0014]And when off-hook is carried out by step S9, end the processing, but. When there is off-hook ** into predetermined time (T_2) as for nothing (Step S10), it moves to Step S3, the switch 3 operates and changes by the signal from the timer 2 again, the ringing tone generating part 7 operates the sounder 8 with the control signal from the control section 1, and singing of the ringing tone is carried out. Namely, the incoming call notice by vibration by the remote control vibrator 200, If the user has attached the remote control vibrator 200 to the body, even if he will notice immediately and it will carry out [therefore] predetermined time (T_2) progress, when off-hook is not carried out, A user judges that the remote control vibrator 200 is not attached to the body, useless operation of the remote control vibrator 200 is pressed down by changing the switch 3 again, and useless consumption of electric power is considered as the composition pressed down as much as possible. And when off-hook is carried out, singing is stopped and the processing is ended (step S4).

[0015]Therefore, even if the electric power switch 15 of the remote control vibrator 200 is in the state where the operation power 14 is on by the ON state, it has composition which presses down the opportunity for the vibrator 13 to vibrate and for electric power to be exhausted, as much as possible, and presses down useless consumption of the operation power (cell) 14. Since an opportunity to vibrate the vibrator 13 as mentioned above can be lessened as much as possible even if the electric power switch 15 is an ON state, it becomes unnecessary, as for a user, to pay attention to ON/OFF of the electric power switch 15 as **.

[0016]

[Effect of the Invention]As explained above, since the cell phone unit of this invention can press down the power consumption, without spoiling the conventional function even if it is in the state where it was put into the power supply by the remote control vibrator, it can work a remote control vibrator for a long time. Since the power consumption can be pressed down even if it is in the state where it was put into the power supply by the remote control vibrator, it becomes unnecessary, as for a user, to stop the electric power switch of a remote control vibrator on a its mind as **. By carrying out singing of the ringing tone automatically, when a portable telephone body is vibrated first, then a remote control vibrator is vibrated and off-hook

still is not carried out, even if it has furthermore set it as oscillating information mode. User-friendliness becomes good and there is an effect of being able to notify a user now of mail arrival certainly.

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TECHNICAL FIELD

[Field of the Invention]This invention relates to the portable telephone provided with what is called a remote control (remote control) vibrator.

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PRIOR ART

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EFFECT OF THE INVENTION

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TECHNICAL PROBLEM

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DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]

[Drawing 1]It is a block diagram showing one embodiment of the equipment configuration of this invention.

[Drawing 2]It is a flow chart for explaining operation of this embodiment.

[Description of Notations]

- 1 Control section
- 2 Timer
- 3 Changeover switch
- 4 Vibrator actuator
- 5 The main part side vibrator
- 6 Transmitter
- 7 Ringing tone generating part
- 8 Sounder
- 11 Receiver
- 12 Vibrator actuator
- 13 Vibrator
- 14 Operation power
- 15 Electric power switch
- 100 Portable telephone side device
- 200 Remote control vibrator

[Translation done.]

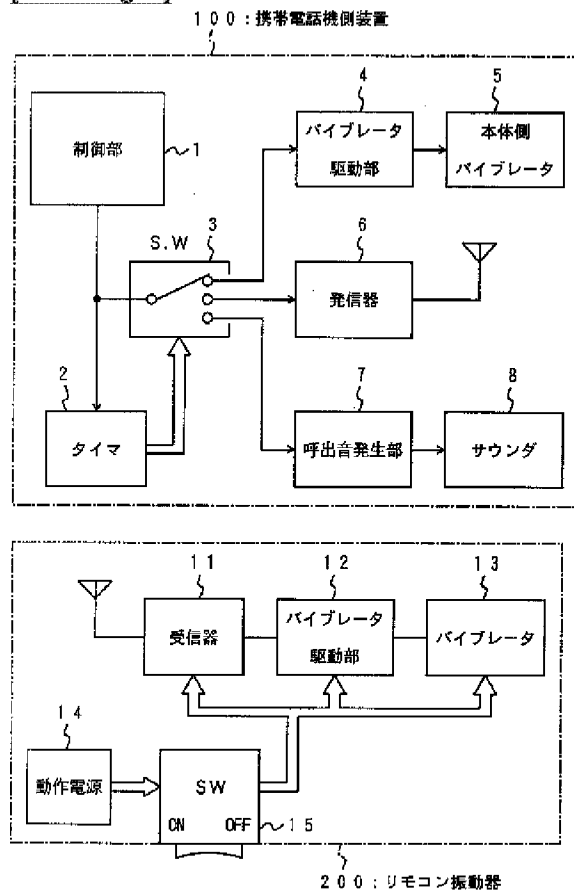
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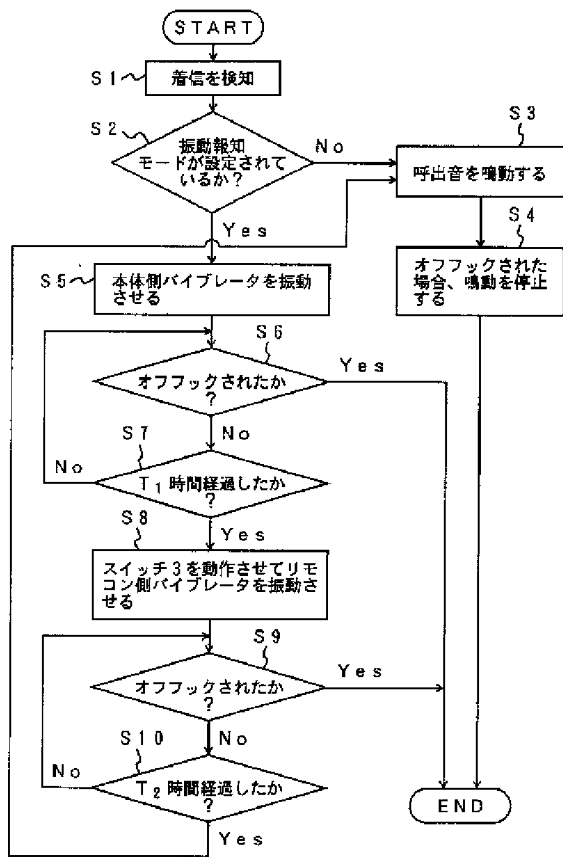
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DRAWINGS

[Drawing 1]



[Drawing 2]



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